Title: METHOD AND SYSTEM FOR GENERATING
AND PROVIDING RICH MEDIA PRESENTATIONS OPTIMIZED FOR A DEVICE
OVER A NETWORK
Inventor: Hegde et al
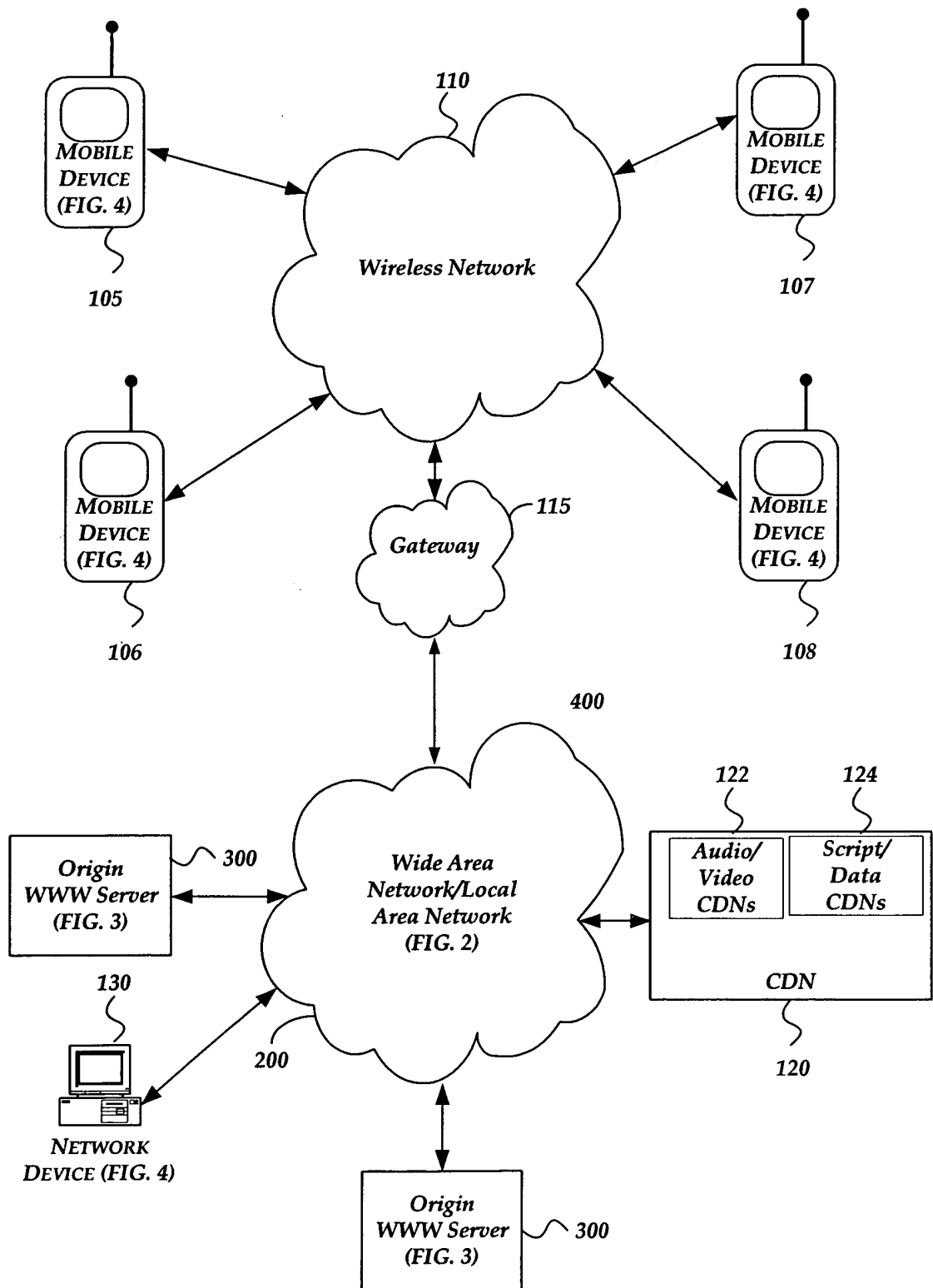Docket No: M&G 50023.8USU1

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Fig.1

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Fig.2

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300

www server

CPU — 312

316

322

320

RAM

operating system

www server

CD-ROM/ DVD-ROM drive

310

326

network interface unit

330

programs

input/output interface

334

Rich Media Presentations Application

324

336

hard disk drive

338

332

ROM

video display adapter

314

bios

318

Fig.3

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400

Network Device

CPU — *412*

422

416

RAM — *420*

operating
system

410

Power — *426*

Network
Interface
unit

Rich Media
Presentations Player
Application

430

424

programs — *434*

input/output
interface

Data Storage — *436*

458

Keypad

LED — *450*

448

432

ROM

bios — *418*

Infrared
I/O — *460*

Audio — *454*

Display — *456*

Memory

Fig.4

Title: METHOD AND SYSTEM FOR GENERATING
AND PROVIDING RICH MEDIA PRESENTATIONS OPTIMIZED FOR A DEVICE
OVER A NETWORK
Inventor: Hegde et al
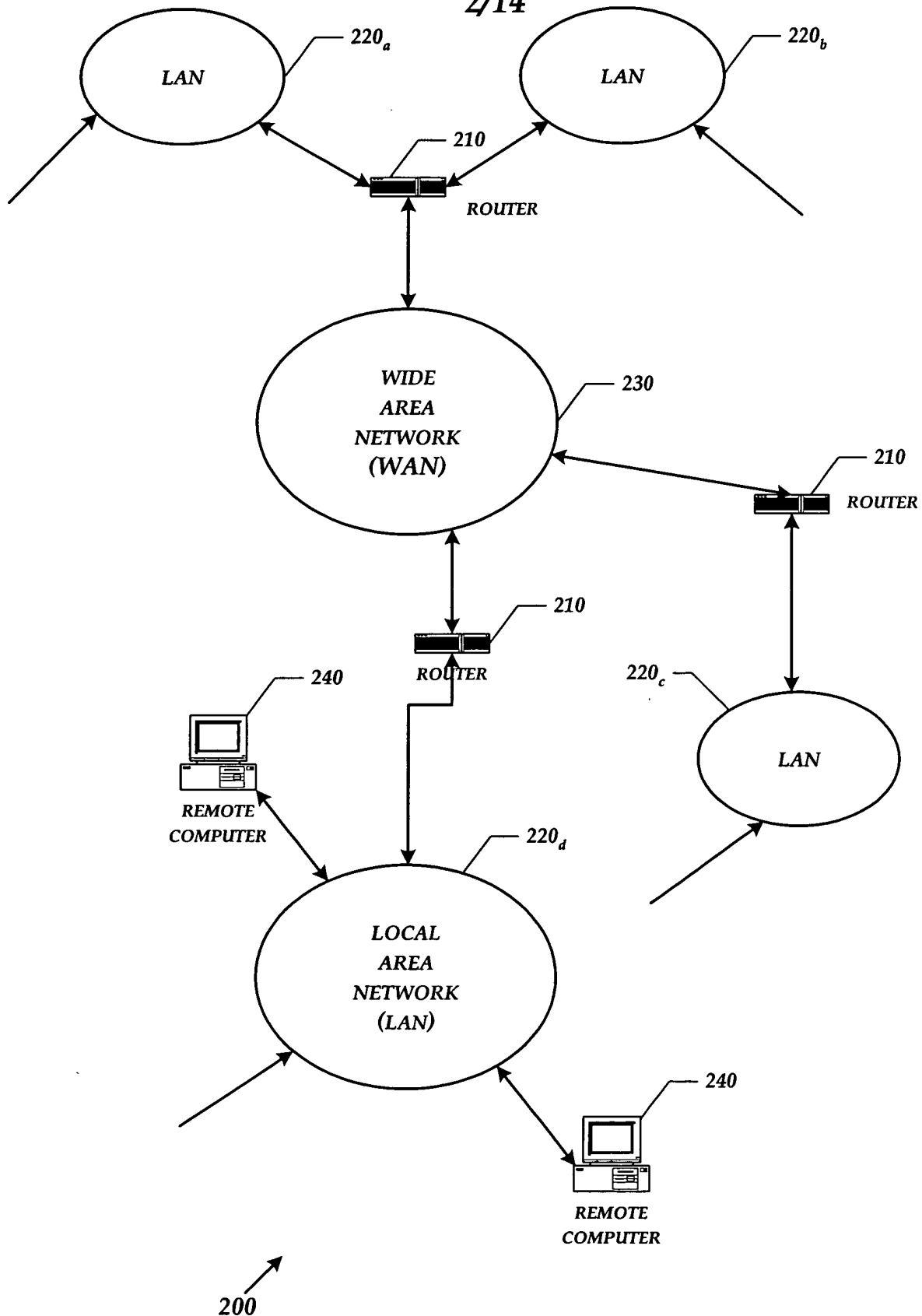Docket No: M&G 50023.8USU1

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500

Request Content from CDN

510

Network Device

Packet Switched Network

520

CDN

Assemble Content Based on Network Device

Deliver Content

On a Miss, if Content Expires, or if Content is Modified, Obtain Content from Origin

530

Origin Server

Fig. 5

Title: METHOD AND SYSTEM FOR GENERATING
AND PROVI●G RICH MEDIA PRESENTATIONS OP●ZED FOR A DEVICE
OVER A NETWORK
Inventor: Hegde et al
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600

605

Network Device Content

Streaming Services Networks 610

Content Delivery Networks 615

Edge Caching Networks 620

Rich Media Presentations Assembler Application

Restrictor 625

650

Device Trackers and Detectors

Object Handlers

630

635

640

645

Presentation Package Assembler

Virtual Player Assembler

Media Package Assembler

Stream Switch

Fig. 6

Title: METHOD AND SYSTEM FOR GENERATING
AND PROVIDING RICH MEDIA PRESENTATIONS OPTIMIZED FOR A DEVICE
OVER A NETWORK
Inventor: Hegde et al
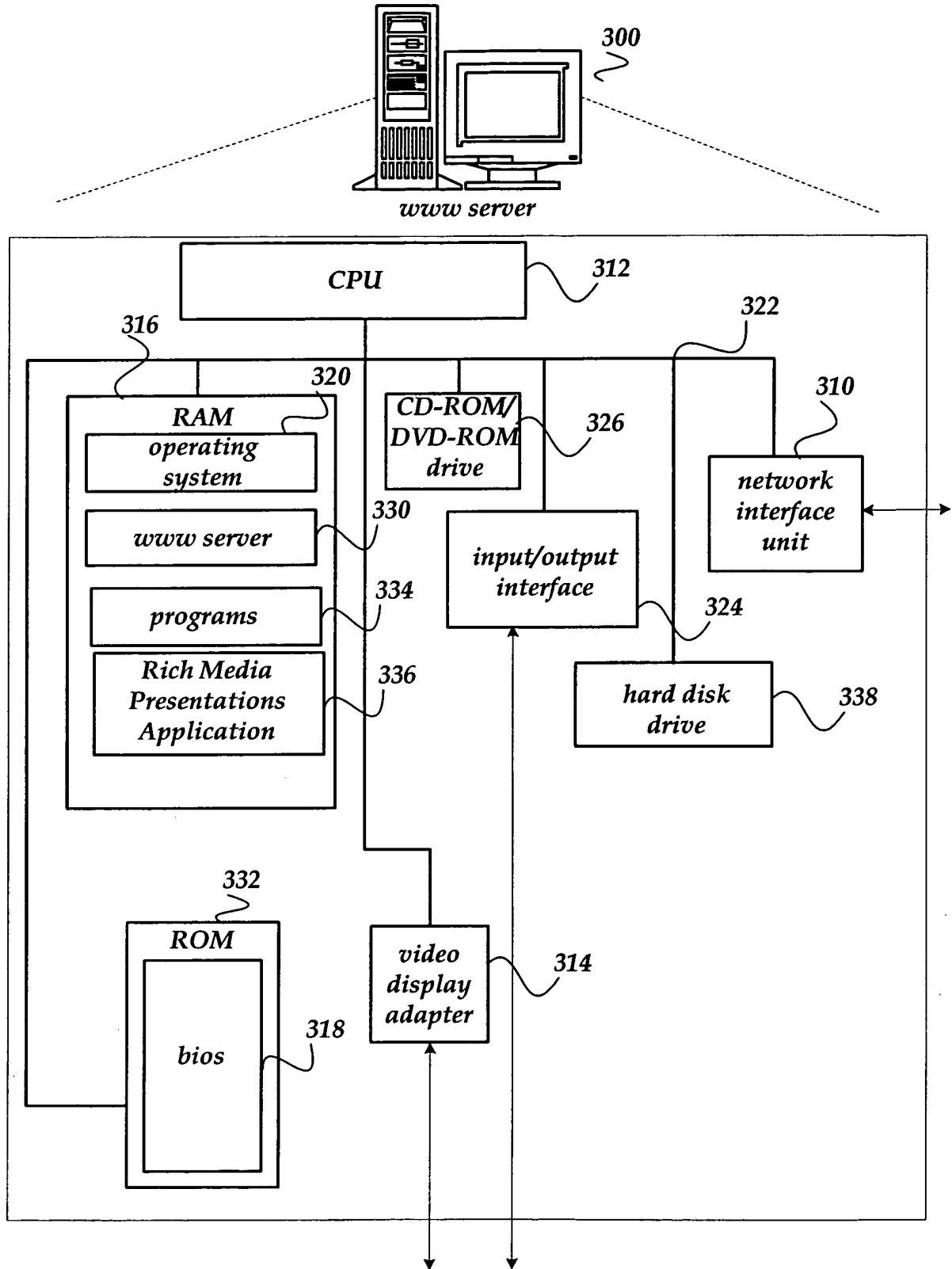Docket No: M&G 50023.8USU1

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Fig.7

Title: METHOD AND SYSTEM FOR GENERATING
AND PROVIDING RICH MEDIA PRESENTATIONS OPTIMIZED FOR A DEVICE
OVER A NETWORK
Inventor: Hegde et al
Docket No: M&G 50023.8USU1

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800

810

WINDOWS XP/
Internet Explorer
6.0

850

WINDOWS NT/
Netscape 4.75

805

820

Unix/Netscape 4.5

Server

840

WINDOWS ME
Internet Explorer
5.0

830

OS/Browser

860

Requesting
Device's Media
Player

870

Mobile Device's
OS/Browser

Fig.8

Title: METHOD AND SYSTEM FOR GENERATING
AND PROVIDING RICH MEDIA PRESENTATIONS OPTIMIZED FOR A DEVICE
OVER A NETWORK
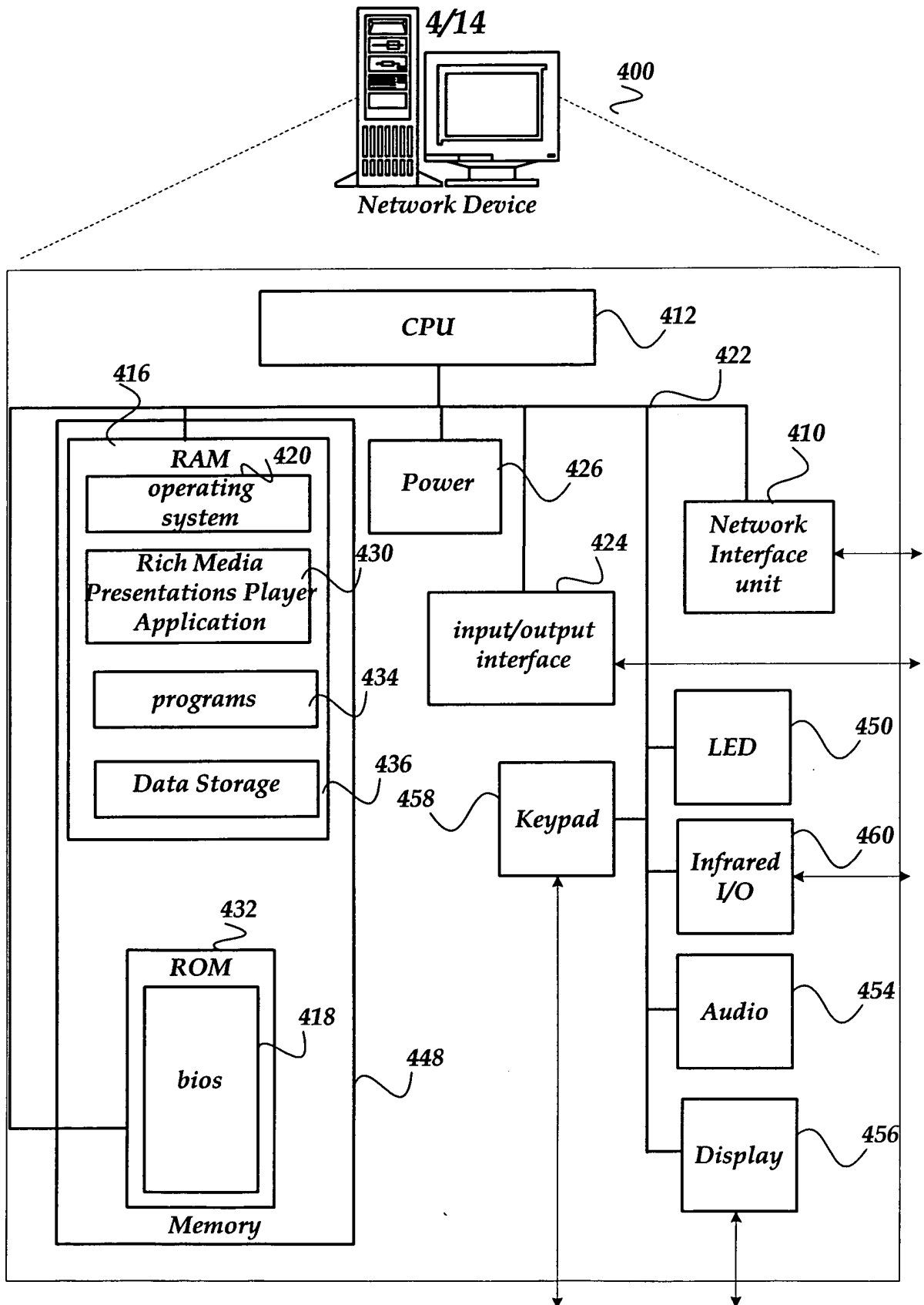Inventor: Hegde et al
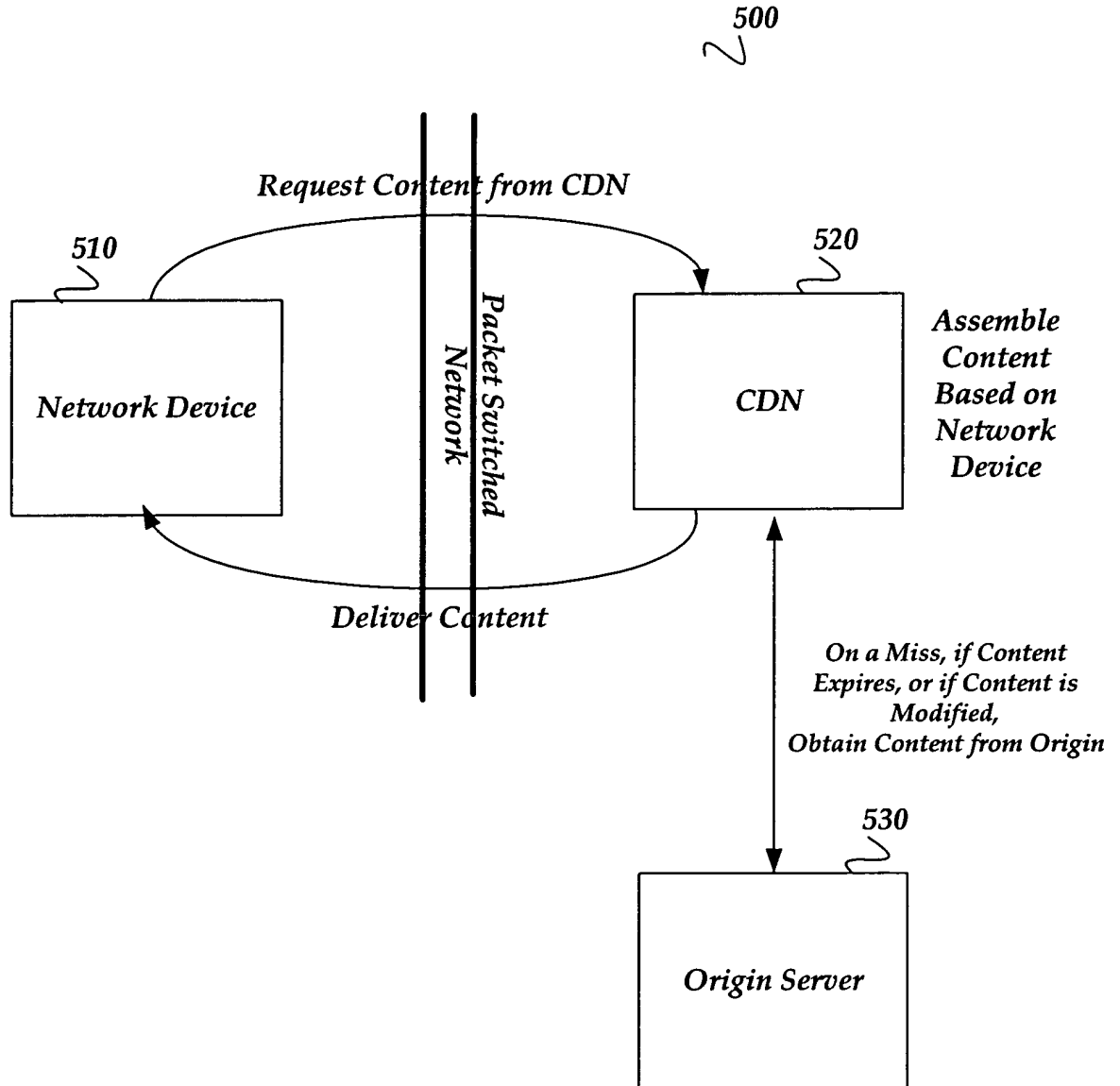Docket No: M&G 50023.8USU1

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```
                    ┌─────────────┐
                    │    Start    │
                    └──────┬──────┘
                           │
                           ▼
              ┌────────────────────────┐
              │  Determine if Network   │ ⌇ 910
              │  Device is Authorized   │
              └───────────┬────────────┘
                          │
                          ▼
                       ╱──────╲                              930
                    ╱            ╲    920                     ⌇
                 ╱   Network Device  ╲ ⌇                ┌──────────────────┐
                │    Authorized?      │───NO──────────▶│  Refuse Service  │
                 ╲                   ╱                  └────────┬─────────┘
                    ╲            ╱                               │
                       ╲──────╱                                  │
                          │                                      │
                         YES                                     │
                          ▼                                      │
              ┌────────────────────────┐                        │
              │   Determine Network     │                        │
              │   Device Attributes     │ ⌇ 940                  │
              │     (FIG. 10-11)        │                        │
              └───────────┬────────────┘                        │
                          │                                      │
                          ▼                                      │
              ┌────────────────────────┐                        │
              │    Provide Rich Media   │                        │
              │     Presentations       │ ⌇ 950                  │
              │     (FIG. 12-13)        │                        │
              └───────────┬────────────┘                        │
                          │                                      │
                          └──────────────────┬───────────────────┘
                                             │
                                             ▼
                                    ┌─────────────┐
                                    │     End     │
                                    └─────────────┘
```

Fig.9

Title: METHOD AND SYSTEM FOR GENERATING
AND PROVIDING RICH MEDIA PRESENTATIONS OPTIMIZED FOR A DEVICE
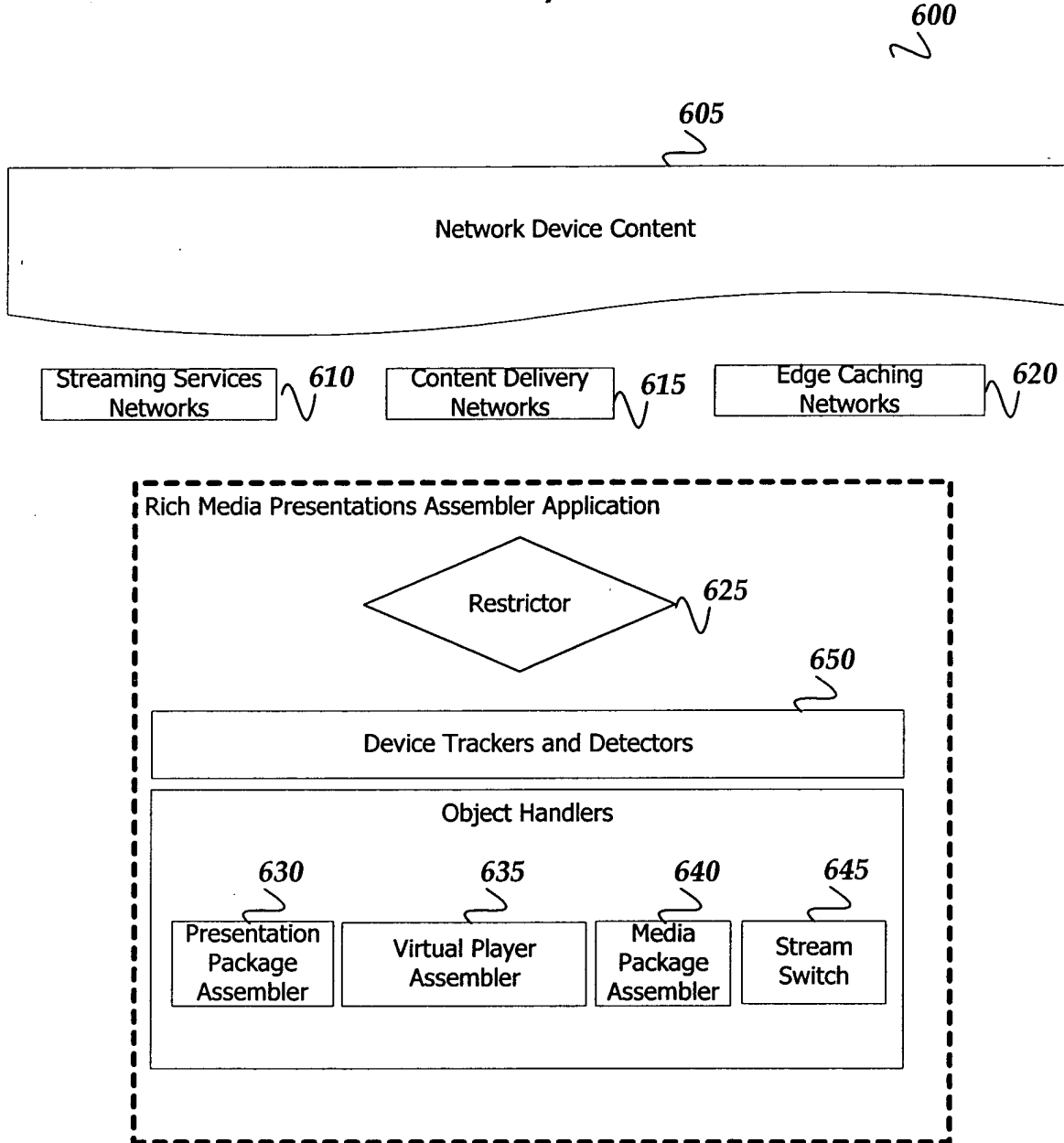OVER A NETWORK
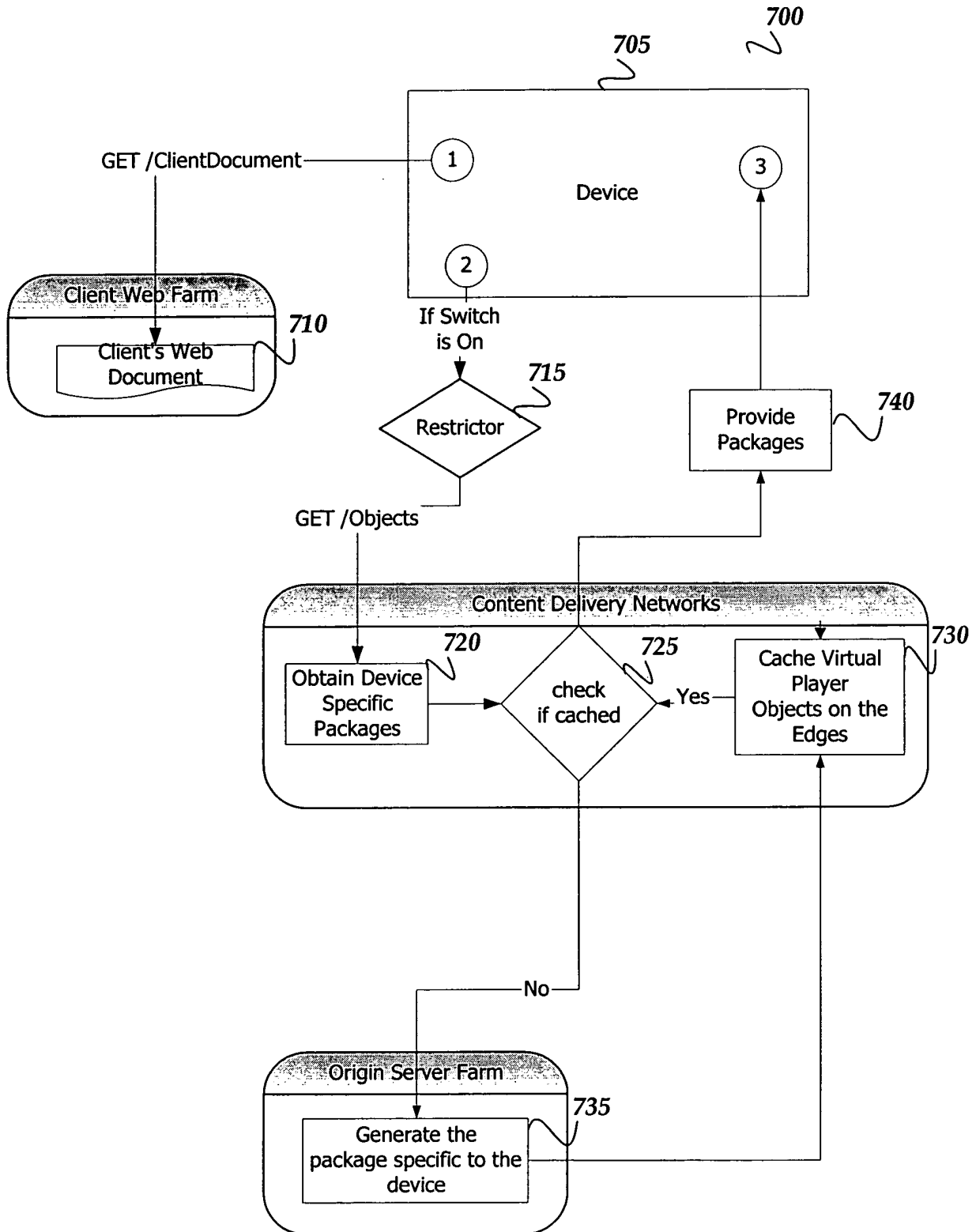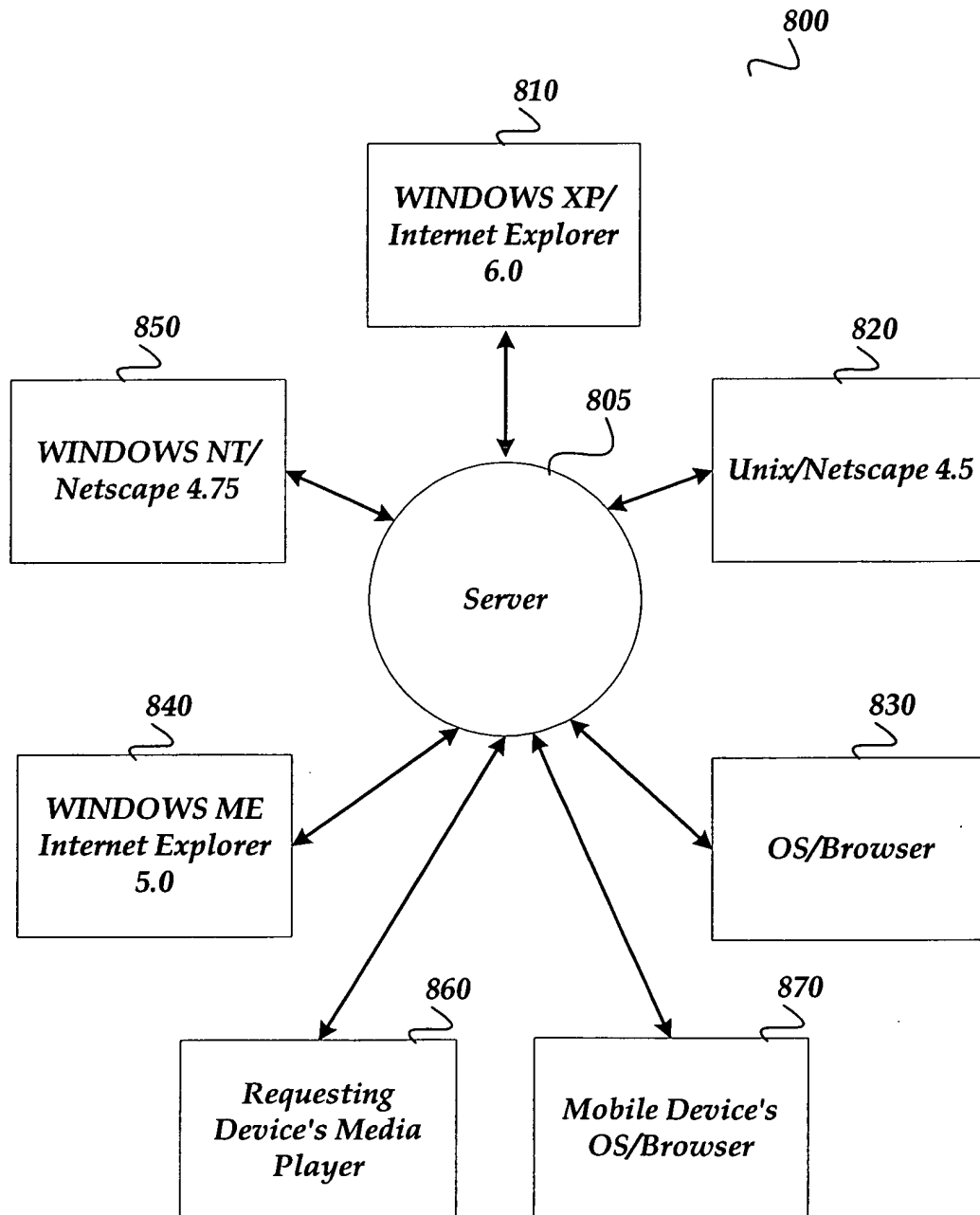Inventor: Hegde et al
Docket No: M&G 50023.8USU1

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Start

Detect Basic Operating
Attributes   1010

Basic Operating
Characteristics
Supported?   1020

NO

Yes

Inform Requesting
Device that it is Not
Supported   1030

Determine Network
Device Attributes
(FIG. 11)   1040

End

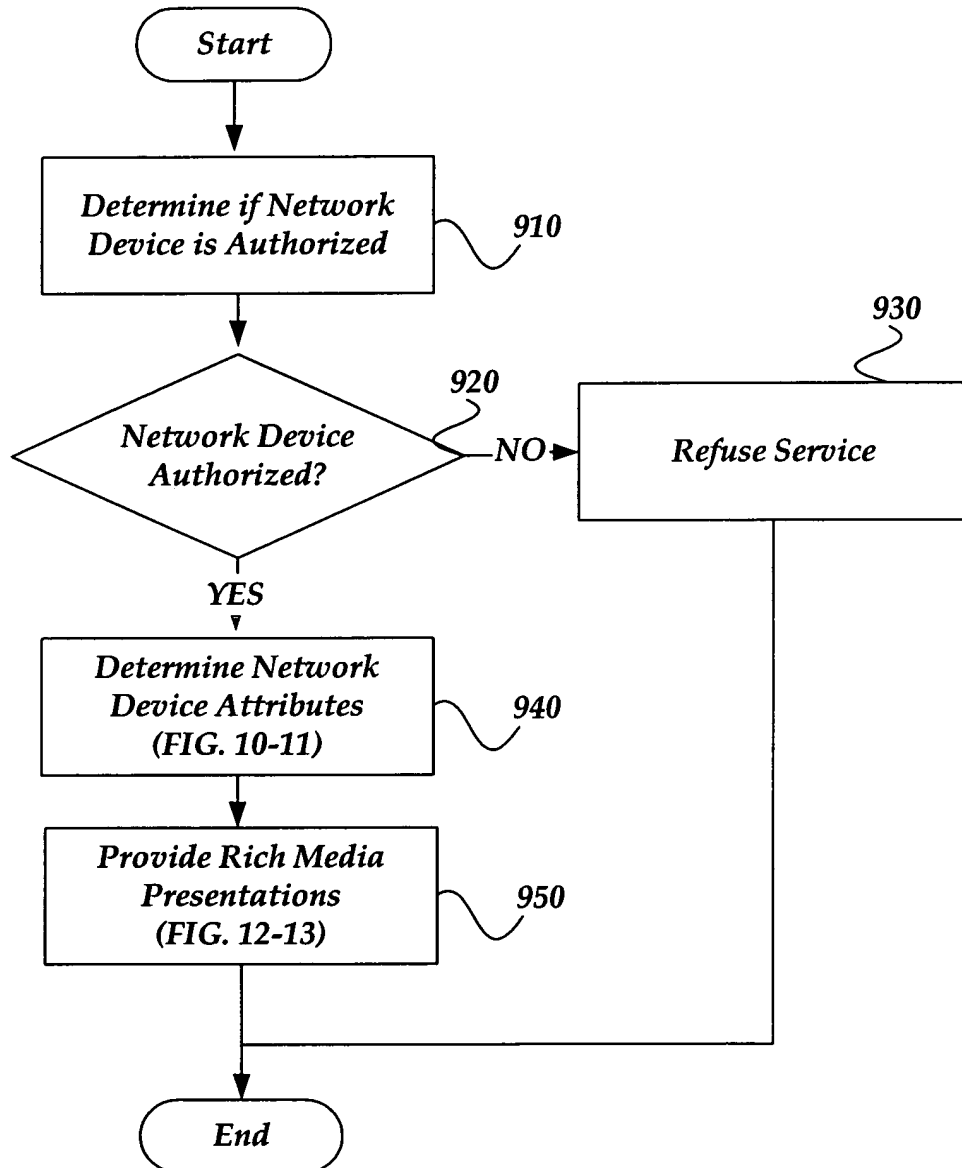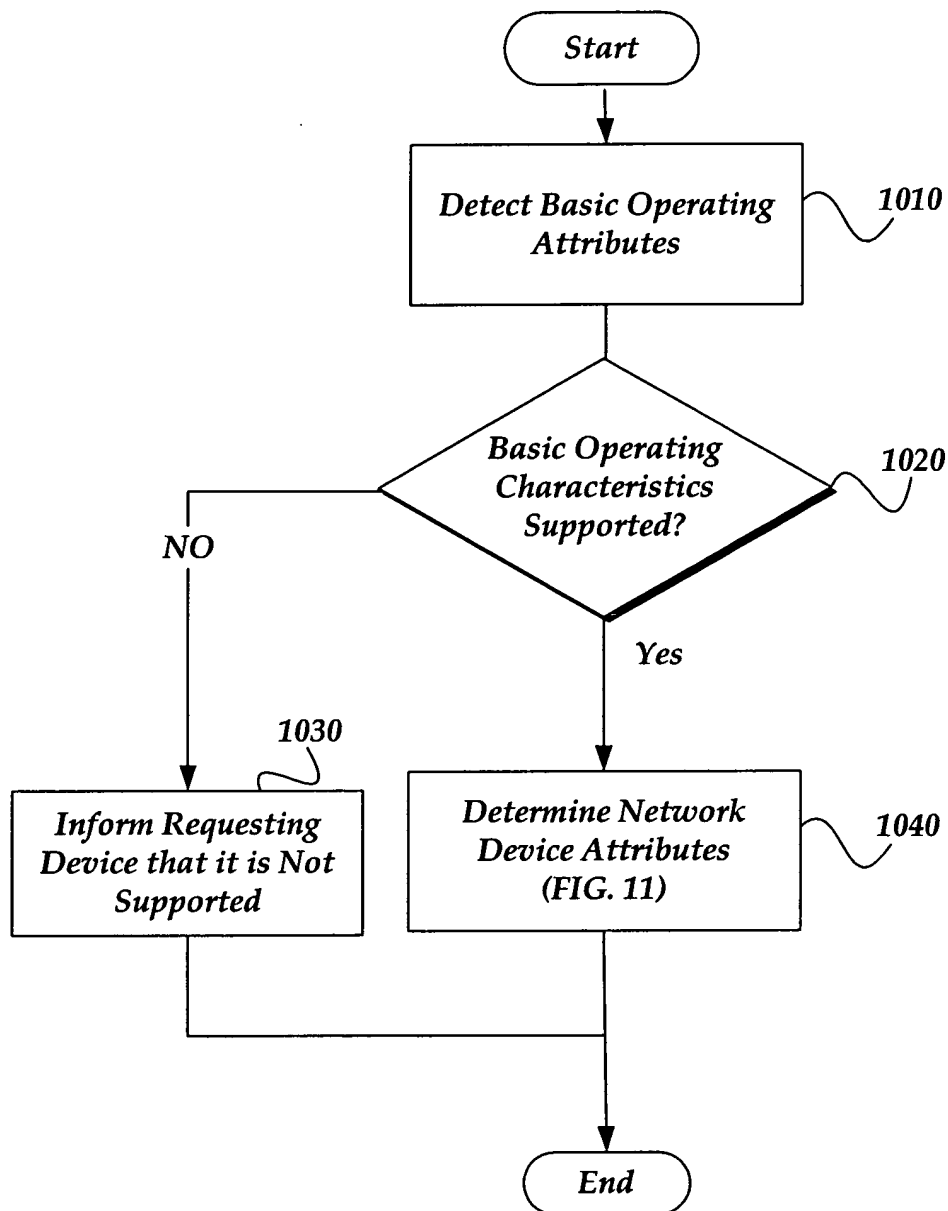*Fig.10*

Title: METHOD AND SYSTEM FOR GENERATING
AND PROVIDING RICH MEDIA PRESENTATIONS OPTIMIZED FOR A DEVICE
OVER A NETWORK
Inventor: Hegde et al
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```
                    ┌──────────┐
                    │  Start   │
                    └──────────┘
                         │
                         ▼
              ┌──────────────────────┐
              │                      │
              │  Determine Language  │───── 1110
              │                      │
              └──────────────────────┘
                         │
                         ▼
              ┌──────────────────────┐
              │  Determine Network   │
              │      Bandwidth       │───── 1120
              │                      │
              └──────────────────────┘
                         │
                         ▼
              ┌──────────────────────┐
              │  Determine if Firewall │
              │       Present        │───── 1130
              │                      │
              └──────────────────────┘
                         │
                         ▼
              ┌──────────────────────┐
              │                      │
              │ Determine Permissions │───── 1140
              │                      │
              └──────────────────────┘
                         │
                         ▼
              ┌──────────────────────┐
              │   Determine Other    │
              │     Attributes       │───── 1150
              │                      │
              └──────────────────────┘
                         │
                         ▼
                    ┌──────────┐
                    │   End    │
                    └──────────┘
```

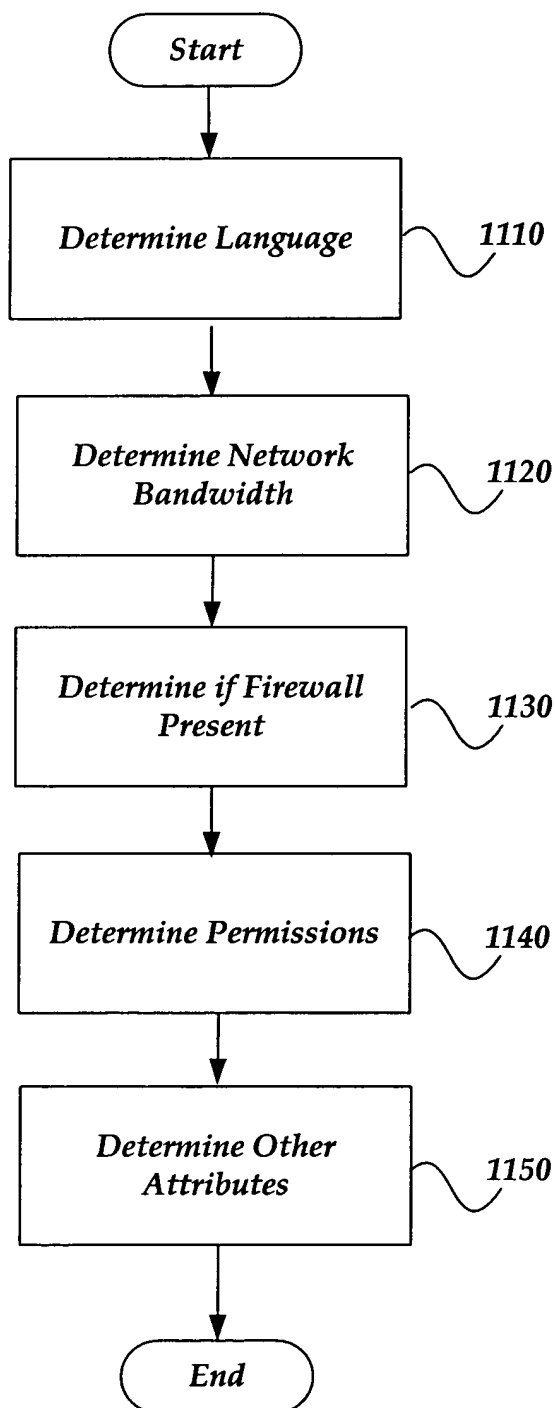*Fig.11*

Title: METHOD AND SYSTEM FOR GENERATING
AND PROVIDING RICH MEDIA PRESENTATIONS OPTIMIZED FOR A DEVICE
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Inventor: Hegde et al
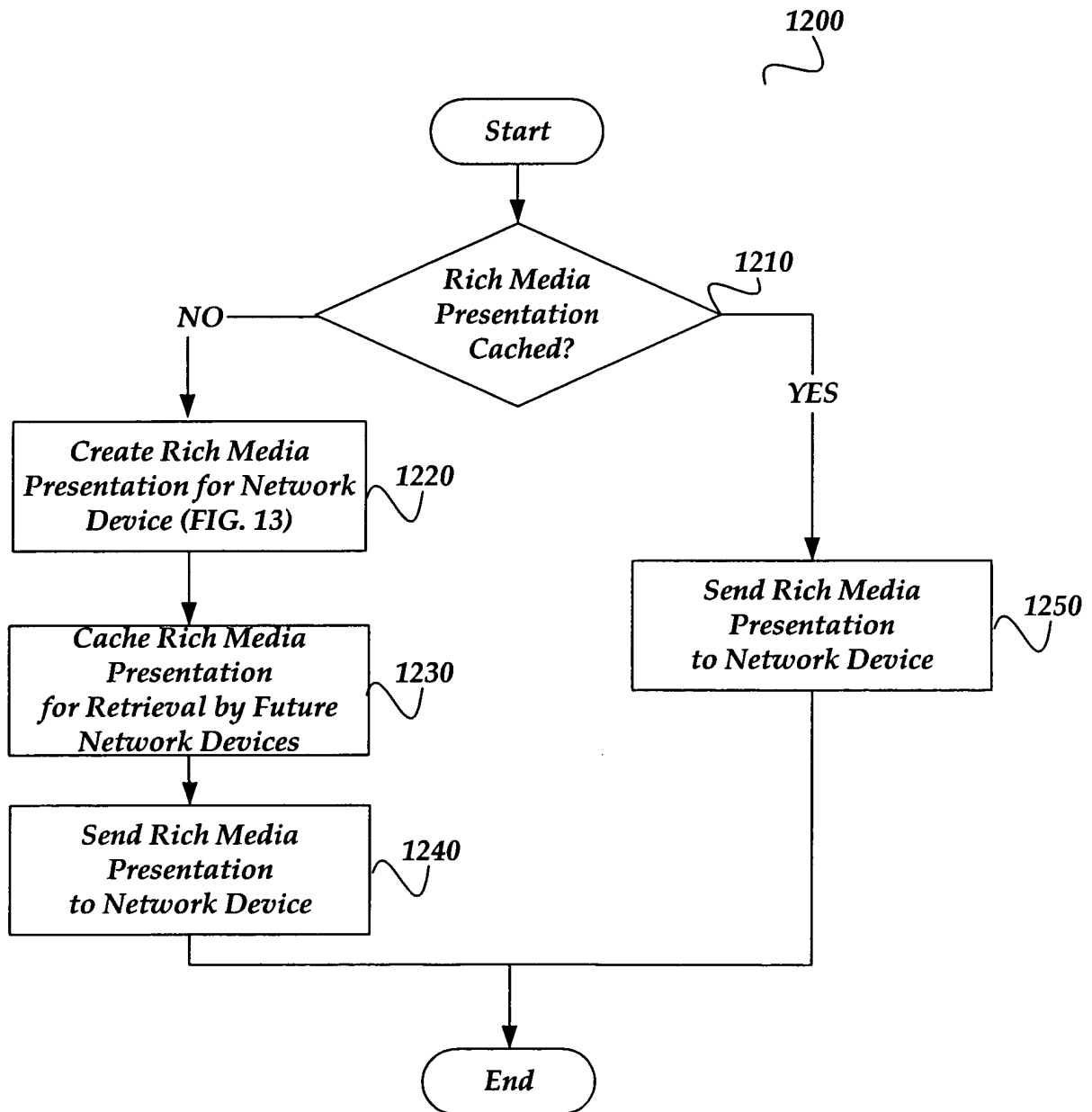Docket No: M&G 50023.8USU1

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1200

```
                          ┌──────────────┐
                          │    Start     │
                          └──────┬───────┘
                                 │
                                 ▼
                          ╱─────────────╲
                         ╱  Rich Media   ╲        1210
              NO        ╱  Presentation   ╲
            ◄───────────   Cached?        
                         ╲                ╱
                          ╲──────────────╱
                                 │
                                 │ YES
                                 ▼
```

NO branch	YES branch
Create Rich Media Presentation for Network Device (FIG. 13) — 1220	**Send Rich Media Presentation to Network Device** — 1250
Cache Rich Media Presentation for Retrieval by Future Network Devices — 1230	
Send Rich Media Presentation to Network Device — 1240	

```
                          ┌──────────────┐
                          │     End      │
                          └──────────────┘
```

Fig.12

Title: METHOD AND SYSTEM FOR GENERATING
AND PROVIDING RICH MEDIA PRESENTATIONS OPTIMIZED FOR A DEVICE
OVER A NETWORK
Inventor: Hegde et al
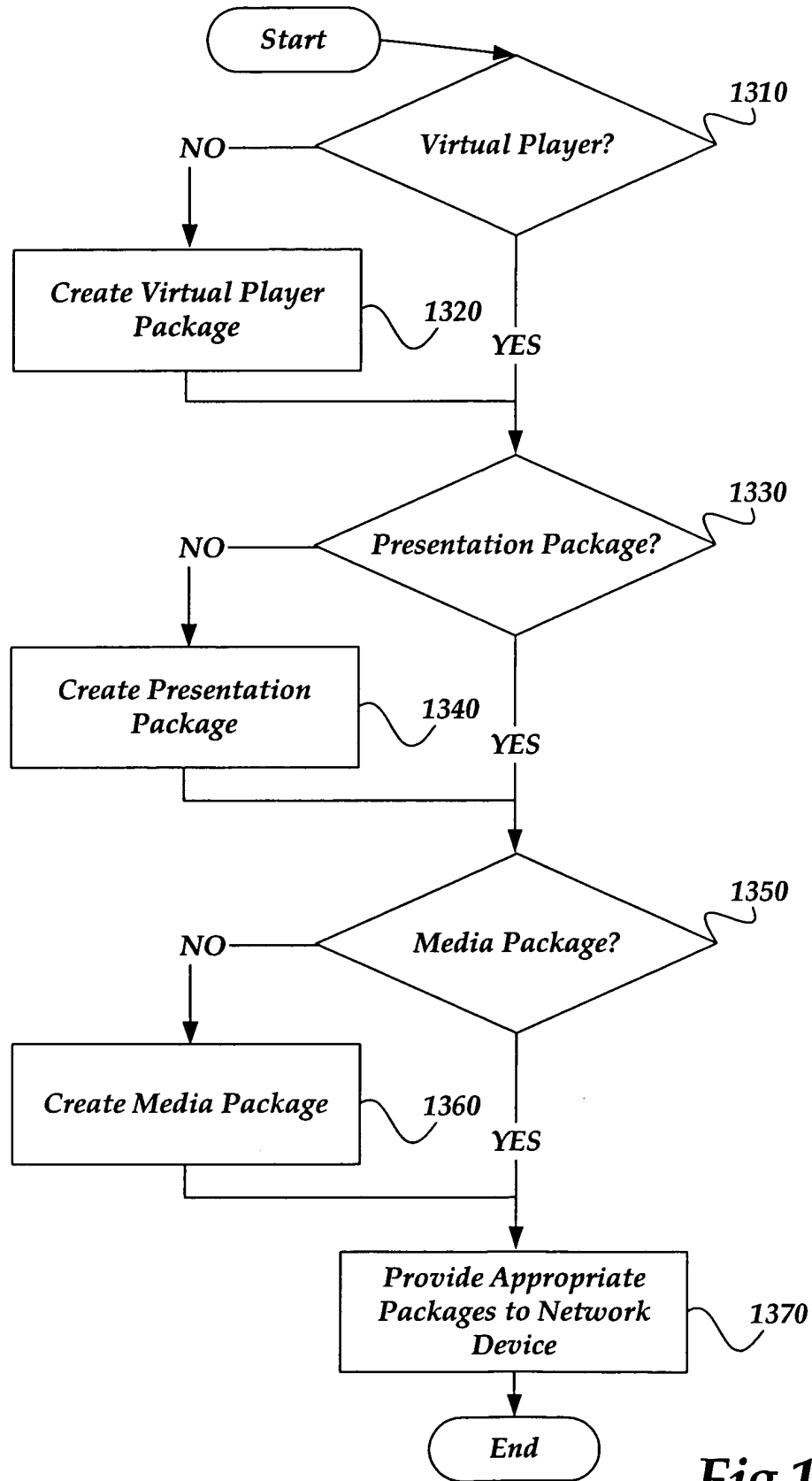Docket No: M&G 50023.8USU1

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Fig.13

Title: METHOD AND SYSTEM FOR GENERATING
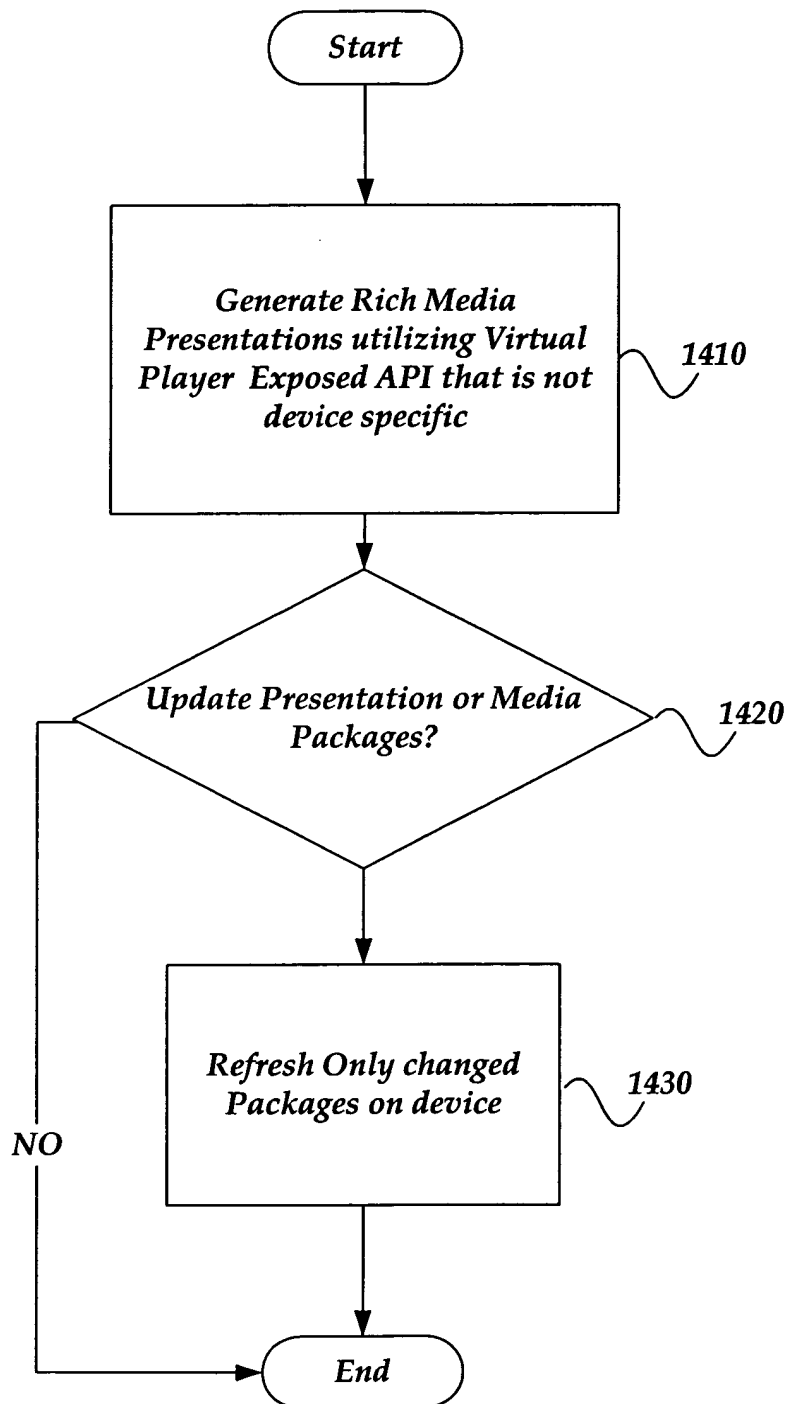AND PROVIDING RICH MEDIA PRESENTATIONS OPTIMIZED FOR A DEVICE
OVER A NETWORK
Inventor: Hegde et al
Docket No: M&G 50023.8USU1

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Start

Generate Rich Media Presentations utilizing Virtual Player Exposed API that is not device specific — 1410

Update Presentation or Media Packages? — 1420

NO

Refresh Only changed Packages on device — 1430

End

Fig.14